

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB88

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for the Tidewater Goby

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to list the tidewater goby (*Eucyclogobius newberryi*) as endangered, as provided by section 4 of the Endangered Species Act of 1973, as amended (Act). The tidewater goby is a fish that occurs in tidal streams associated with coastal wetlands in California. This species has significantly declined throughout its historic range and continues to be threatened by loss and degradation of its coastal habitat. Since 1900, the tidewater goby has disappeared from nearly 50 percent of the coastal lagoons within its historic range, including 74 percent of the lagoons south of Morro Bay. Only three populations currently exist south of Ventura County. The Service seeks comments and data from the public on this proposed rule.

DATES: Comments from all interested parties must be received by February 9, 1993. Public hearing requests must be received by January 25, 1993.

ADDRESSES: Comments and materials concerning this proposal should be sent to Office Supervisor, U.S. Fish and Wildlife Service, Ventura Field Office, 2140 Eastman Avenue, suite 100, Ventura, California 93003 (telephone 805/644-1766). Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Donna C. Brewer, Ventura Field Office (see ADDRESSES section).

SUPPLEMENTARY INFORMATION:**Background**

The tidewater goby, *Eucyclogobius newberryi* (Girard), is a small fish, rarely exceeding 50 mm (2 inches) standard length, and is characterized by large pectoral fins and a ventral sucker-like disk formed by the complete fusion of the pelvic fins. The tidewater goby was first described as a new species (*Gobius newberryi*) by Girard (1856) from specimens collected in the San Francisco Bay area. Based on Girard's

specimens, Gill (1862) reassigned *Gobius newberryi* to the newly described genus *Eucyclogobius* (Eschmeyer 1990).

A member of the family Gobiidae, the tidewater goby is the only species in the genus *Eucyclogobius* and is almost unique among fishes along the U.S. Pacific coast in its restriction to low-salinity waters in California's coastal wetlands. All life stages of tidewater gobies are found at the upper end of lagoons in salinities less than 10 parts per thousand (ppt). Although its closest relatives are marine species, the tidewater goby does not have a marine life history phase. This lack of a marine phase severely restricts the frequency of genetic exchange between coastal lagoon populations and significantly lowers the potential for natural recolonization of a locality once extirpated. Studies by Crabtree (1985) noted that some populations of gobies have differentiated genetically, indicating long isolation. Tidewater gobies have a shorter lifespan, and seem to be an annual species (Swift 1990; Irwin and Stoltz 1984), further restricting their potential to recolonize habitats from which they have been extirpated.

The tidewater goby occurs in shallow water (less than 1 meter (3 ft) deep), on the substrate, in loose aggregations of a few to several hundred individuals (Swift *et al.* 1989). Peak nesting activities commence in late April or early May, when male gobies dig a vertical nesting burrow 10–20 centimeters (4–8 in) deep in clean, coarse sand. Suitable water temperatures for nesting are 18–22 °C with salinities of 5–10 ppt. Male gobies remain in the burrows to guard eggs, which are hung from the ceiling and walls of the burrow until hatching. Larval gobies are found midwater around vegetation until they become benthic (Swift *et al.* 1989). Although the potential for year-round spawning exists, it is probably unlikely, because of seasonal low temperatures and disruptions of lagoons during winter storms. Although usually associated with lagoons, the tidewater goby has been documented in ponded freshwater habitats as far as 8 km (5 miles) upstream from San Antonio lagoon in Santa Barbara County (Irwin and Stoltz 1984).

Currently, the tidewater goby is discontinuously distributed throughout California, ranging from Tillas Slough (mouth of the Smith River), Del Norte County, south to Agua Hedionda Lagoon in San Diego County. Areas of precipitous coastlines that preclude the formation of lagoons at stream mouths

have created three natural gaps in the distribution of the goby. Gobies are apparently absent from three sections of the coast, between: (1) Humboldt Bay and Ten Mile River, (2) Point Arena and Salmon Creek, and (3) Monterey Bay and Arroyo del Oso.

Roughly 10 percent of the coastal lagoons presently containing populations of tidewater goby are under Federal ownership. Over 40 percent of the remaining populations are either wholly or partly owned and managed by the State of California. The remainder are privately owned.

Previous Federal Action

The tidewater goby was first classified by the Service as a category 2 species in 1982 (47 FR 58454). It was reclassified as a category 1 candidate in 1991 (56 FR 58804) based on status and threat information in Swift *et al.* (1989). Category 2 applies to taxa for which information in the possession of the Service indicates that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not available to support proposed rules. Category 1 applies to taxa for which the Service has on file substantial information on biological vulnerability and threats to support proposals to list them as endangered or threatened species. On October 24, 1990, the Service received a petition from Dr. Camm Swift, Associate Curator of Fishes at the Los Angeles Museum of Natural History, to list the tidewater goby as endangered (Swift 1990). The Service's finding that this petition presented substantial information that the requested action may be warranted was published on March 22, 1991 (56 FR 12146). Following this finding, the Service initiated a status review on the tidewater goby.

Section 4(b)(3)(B) of the Endangered Species Act (Act), as amended in 1982, requires the Secretary to make a finding within 12 months of the date a petition is received as to whether or not the requested action is warranted. Based on the additional information supplied by Dr. Swift's petition, this proposed rule constitutes the Service's finding that the petitioned action is warranted. The petition, status surveys, and accompanying data describe the goby as imperiled owing to past and continuing wide-ranging losses of coastal and riparian habitats within its historic range.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and

regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the tidewater goby (*Eucyclogobius newberryi*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Coastal development projects that result in the loss of coastal saltmarsh habitat are currently the major factor affecting the tidewater goby. Coastal marsh habitats have been drained and reclaimed for residential and industrial developments, and waterways have been dredged for navigation and harbors, resulting in permanent and direct losses of wetland habitats as well as indirect losses due to associated changes in salinity. Coastal road construction projects have severed the connection between marshes and the ocean, resulting in unnatural temperature and salinity profiles that the tidewater goby cannot tolerate.

Furthermore, upstream water diversions adversely affect the tidewater goby by altering downstream flows, thereby diminishing the extent of marsh habitats that occurred historically at the mouths of most rivers and creeks in California. Alterations of flows upstream of coastal lagoons has already changed the distribution of downstream salinity regimes. Since the tidewater goby has relatively narrow salinity tolerances, changes in salinity distributions due to upstream water diversions may adversely affect both the size and distribution of goby populations (D. Holland, Univ. of Southwestern Louisiana, pers. comm., 1991).

Historically, the tidewater goby occurred in at least 87 of California's coastal lagoons (Swift *et al.* 1989). Since 1900, it has disappeared from approximately 50 percent of formerly occupied lagoons. A rangewide status survey conducted in 1984 found that 22 historic populations of tidewater goby had been extirpated (Swift *et al.* 1989). Only 5 years later, a subsequent status survey documented the disappearance of an additional 21 populations. In the San Francisco Bay area, 9 of 10 previously identified populations have disappeared (Swift *et al.* 1989, 1990). Losses in the southern part of the State have been greatest, including 74 percent of the coastal lagoons south of Morro

Bay. Only three populations currently remain south of Ventura County. Since 1989, three additional tidewater goby populations have been lost, in San Luis Obispo and Santa Cruz counties (Swift *et al.* 1989, 1990). Five small populations have been rediscovered since 1984, but the overall losses indicate a decline of 35 percent rangewide in only 6 years (Holland 1991a, 1991b, 1991c; Swift *et al.* 1991).

Of the 43 remaining populations of tidewater gobies identified by Swift *et al.* (1990), most are small and threatened by a variety of both human and natural factors. According to Swift *et al.* (1990), only 6 extant localities contain populations that are considered large enough and free enough from habitat degradation to be safe for the immediate future. These areas are all located north of San Francisco Bay. The remaining lagoons are so small or so modified that tidewater goby populations are restricted in distribution and vulnerable to elimination (Swift *et al.* 1989, 1990). The number of extirpated localities of gobies has left remaining populations so widely separated throughout most of its range that recolonization is unlikely.

Several specific proposed and ongoing coastal development activities threaten habitats supporting tidewater gobies, including (1) road widening and bridge replacement projects along Highway 101, (2) water diversion projects in San Luis Obispo County, (3) expansion of several State Park Recreation areas in Santa Barbara and San Luis Obispo Counties, and (4) hotel and golf course developments in San Luis Obispo and Marin Counties.

In addition to these specific threats, the tidewater goby is vulnerable throughout its remaining range because of the loss of coastal marsh, as noted above and because of other effects of water diversions as well. In addition to restricting the goby's overall range by altering downstream salinities, water diversions and alternations of water flows may negatively impact the species' breeding and foraging activities. Gobies in southern and central California breed primarily in sand/mud substrates and apparently avoid areas that contain large amounts of decaying vegetation (Holland 1991b). Reductions in water flows may allow aggressive plant species to colonize the otherwise bare sand/mud substrates of coastal lagoon margins, thus degrading the habitat quality for the goby. Decreases in stream flows also reduce the deep stream pools utilized by gobies venturing upstream from lagoons. In San Luis Obispo County alone, the effects of drought, either directly or

exacerbated by upstream water diversions, have been responsible for the extirpation of at least three populations of gobies between 1986 and 1990 (K. Worcester, Calif. Dept. Fish Game, pers. comm., 1991).

The tidewater goby is also adversely affected by groundwater overdrafting and discharge of agricultural and sewage effluents. In Santa Barbara, for example, increased groundwater pumpage and siltation from topsoil runoff in the San Antonio Creek drainage has significantly affected areas immediately upstream of occupied goby habitat (i.e., Barka Slough) (C. Swift, Los Angeles County Museum of Natural History, pers. comm., 1991). Swift *et al.* (1989) cite evidence that enrichment by agricultural and sewage effluents may cause algal blooms and deoxygenation that restrict habitable areas of lagoons utilized by tidewater gobies, especially in summer. The potential for these factors to degrade remaining goby habitats has also been noted at all three extant localities south of Ventura County (D. Holland, pers. comm., 1991), and at several sites along the central California coast (T. Taylor, Calif. State Parks and Recreation, pers. comm. 1991; K. Worcester, pers. comm., 1991).

The tidewater goby is further threatened by channelization of the rivers it inhabits. Because most of the goby's localities have been moderately to extremely channelized, winter floods scour the species out of the restricted channelized areas where no protection is afforded from such high flows. This type of event was responsible for the disappearance of gobies from Waddell Creek lagoon in the winter 1972-73 (C. Swift, pers. comm., 1991), and they have not returned.

Finally, cattle grazing and feral pig activities also present a threat to the existence of the tidewater goby. These activities have resulted in increased sedimentation of coastal lagoons and riparian habitats, removal of vegetative cover, increased ambient water temperatures, and elimination of plunge pools and collapsed undercut banks utilized by tidewater gobies. In San Luis Obispo County, increased sedimentation into Morro Bay has significantly accelerated the conversion of wetland habitats to upland (Josselyn *et al.* 1989). Presently, cattle continue to graze freely both upstream and in many of the coastal lagoons supporting tidewater gobies (K. Worcester, pers. comm., 1991).

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Not known to be applicable.

C. Disease or Predation

Over the past 20 years, at least 60 species of fishes have been introduced to the western states, 59 percent of which are predatory (Hayes and Jennings 1986, Jennings 1988). The introduction of exotic predators to southern California waters has been facilitated by the interbasin transport of water (e.g., California Aqueduct). Introduced predators, particularly centrarchid fishes, may have contributed to the elimination of tidewater gobies from several localities in California (Swift *et al.* 1989). The present-day absence of the tidewater gobies from the San Francisco delta area may well be explained by the presence of introduced predators such as striped bass (*Morone saxatilis*) and native predators including the Sacramento perch (*Archoplites interruptus*) (Swift *et al.* 1989, 1990). Two of the most recent disappearances of gobies from San Luis Obispo County (Old Creek) and San Diego County (San Onofre Creek) are likely due to the presence of largemouth bass (*Micropterus salmoides*) and green sunfish (*Lepomis cyanellus*), respectively. Natural predation on gobies by rainbow trout (*Oncorhynchus mykiss*) has been documented (Swift *et al.* 1989). Other non-native predators, specifically crayfish (*Cambarus spp.*) and mosquitofish (*Gambusia spp.*), may also threaten goby populations through direct predation on adults, larvae, or eggs.

D. The Inadequacy of Existing Regulatory Mechanisms

Section 10 of the Rivers and Harbors Act and section 404 of the Clean Water Act regulate the placement of dredge and fill materials into waters of the United States. Under section 404, nationwide permits, which undergo minimal public and agency review, can be issued for projects involving less than 10 acres of waters of the United States and adjacent wetlands, unless a listed species may be adversely affected. Individual permits, which are subject to more extensive review, are required for projects that affect greater than 10 acres.

The U.S. Army Corps of Engineers (Corps) is the agency responsible for administering the section 10 and section 404 programs. The Service, as part of the section 404 review process, provides comments on both pre-discharge notices for nationwide permits and public notices for individual permits. The Service's comments are only advisory, although procedures exist for elevation when disagreements between the agencies arise. In practice, the Corps' actions under section 10 and section

404 are insufficient to protect the tidewater goby.

Most projects within the range of the tidewater goby may require approval from the Corps as currently described in section 404 of the Clean Water Act. Projects proposed in coastal lagoons may also require a permit under section 10 of the Rivers and Harbors Act. Federal listing of this species would ensure greater consideration of the effects of permitted actions during the review process as well as provide the protections of section 7 of the Endangered Species Act.

The National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) require an intensive environmental review of projects that may adversely affect Federal candidate species. However, project proponents are not required to avoid impacts to this species, and proposed mitigation measures are frequently not adequately implemented. As with section 404 permits, the Service's comments through these environmental review processes are only advisory.

The California Coastal Act (CCA) regulates the approval of developments within the coastal zone. The continued loss and degradation of coastal wetlands since the CCA was enacted in 1974 attests to the limitations of this legislation, although a significant slowing in wetland losses has occurred.

E. Other Natural or Manmade Factors Affecting its Continued Existence

By far, the most significant natural factor adversely affecting the tidewater goby is drought, and resultant deterioration of coastal and riparian habitats. California has recently experienced 5 consecutive years of lower than average rainfall. These drought conditions, when combined with human induced water reductions (i.e., diversions of water from streams, excessive groundwater withdrawals) have degraded coastal and riparian ecosystems and have created extremely stressful conditions for most aquatic species. Formerly large populations of tidewater gobies have declined in numbers owing to reduced availability of suitable lagoon habitats (i.e., San Simeon Creek, Pico Creek), others disappeared owing to lack of water when the lagoons dried (i.e., Santa Rosa Creek). In San Luis Obispo County alone, 6 of 20 populations of tidewater gobies were extirpated between 1984 and 1989 owing to drought coupled with water diversions and pollution (K. Worcester, pers. comm., 1991).

Habitat degradation and losses of the tidewater goby from weather-related

natural phenomena commonly occur, due to the restriction of the species to coastal lagoon systems and its dependence on freshwater inflows. Events such as river flooding and heavy rainfall have been reported to destroy goby burrows and wash gobies out to sea. Storm surges that enter a lagoon may also adversely affect entire goby populations by rapidly changing salinity.

The tidewater goby was undoubtedly subjected to such natural flood events even before major human alteration of drainage basins. As mentioned under Factor A, channelization and urbanization have increased the frequency and perhaps the intensity of such flood events. In addition, populations of gobies are becoming more isolated from one another as intervening populations are extirpated, thus further decreasing the likelihood of successfully colonizing and reestablishing a population lost to a "natural" flood.

Competition with introduced species is a potential threat to the tidewater goby. Although problems have not been documented so far, the spread of two introduced oriental gobies (the yellowfin goby, *Acanthogobius flavimanus*, and chameleon goby, *Tridentiger trigonocephalus*) may have a detrimental effect on the tidewater goby. According to Swift *et al.* (1990), the chameleon goby was recently found in Pyramid Lake, probably imported with central California water. If this goby becomes established in the Santa Clara River as other imported species have (e.g., *Cottus asper*), the tidewater goby population at the mouth of the Santa Clara River may be at risk.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. The tidewater goby has been extirpated from nearly 50 percent of the lagoons within its historic range, including 74 percent of the lagoons south of Morro Bay. Forty-three populations remain; however, only 6 are large in number and reasonably free from immediate threats. Based on this evaluation, the preferred action is to list the tidewater goby as endangered. The tidewater goby has experienced substantial declines throughout its historic range, lives within specific habitat zones that have been, and will continue to be targeted for development and suffer degradation by human activities, and are extremely vulnerable to adverse habitat modification and to water quality changes. The tidewater goby is imminent danger of extinction

throughout its range and requires the full protection of listing as endangered under the Act in order to survive. For the reasons discussed below, critical habitat is not being proposed at this time.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat concurrently with determining a species to be endangered or threatened. Furthermore, the Service is to designate critical habitat on the basis of the best scientific and commercial data available after taking into consideration the economic, and other relevant impacts of specifying an area as critical habitat (16 U.S.C. 1533(b)(2)). In the case of the tidewater goby, critical habitat is not presently determinable. A final designation of critical habitat requires detailed information on the possible economic effects of such a designation. The Service does not currently have sufficient information needed to perform the economic analysis. A delay in the proposed listing of the species in order to gather additional information and perform analyses would not serve the needs of the species. The Service will continue to gather information on this species, and will publish a determination on the designation of critical habitat at a later date.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain activities. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act as codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer informally with the Service on any action that is

likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

A number of Federal agencies or departments control lands that support the tidewater goby. These agencies include the Department of Defense (U.S. Army Corps of Engineers, U.S. Navy, U.S. Air Force, and U.S. Marine Corps) and Department of the Interior (National Park Service and U.S. Fish and Wildlife Service). Federal actions that may be affected by this proposal would be the funding or authorization of projects within the species' habitat, including the construction of roads, bridges, and dredging projects subject to section 404 of the Clean Water Act (33 U.S.C. 1344 *et seq.*) and section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 *et seq.*), and special use permits. Other Federal actions that are subject to environmental review under the National Environmental Policy Act would also require consultation with the Service. Projects on federally owned land would also be subject to the provisions of section 7 of the Endangered Species Act.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt any of these), import or export, transport in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

The Act and 50 CFR 17.22 and 17.23 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, for incidental

take in connection with otherwise lawful activities, and for economic hardship under certain circumstances. Requests for copies of the regulations on listed plants and wildlife and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, Room 432, 4401 North Fairfax Drive, Arlington, Virginia 22203-3507 (703/358-2104).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to this species:

(2) The location of any additional populations of this species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of this species; and

(4) Current or planned activities in the subject area and their possible impacts on this species.

Any final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal. Such requests must be made in writing and addressed to the Office Supervisor at the Ventura Field Office (see ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

A complete list of all references cited herein, as well as others is available

upon request from the Ventura Field Office (see ADDRESSES section).

Author

The primary authors of this proposed rule are Donna C. Brewer and Cathy Brown of the Ventura Field Office (see ADDRESSES section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Public Law 99-625, 100 Stat. 3500; unless otherwise noted.

2. It is proposed to amend § 17.11(h) by adding the following, in alphabetical order under Fishes to the List of Endangered and Threatened Wildlife:

§ 17.12 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Goby, kildewater	<i>Eucyclogobius newberryi</i> ...	U.S.A. (CA)	Entire	E		NA	NA

Dated: November 27, 1992.

Bruce Blanchard,

Acting Director, Fish and Wildlife Service.

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50 CFR Part 17

RIN 1018-AB83

Endangered and Threatened Wildlife and Plants; Proposal To List the Relict Darter and Bluemask (=Jewel) Darters as Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes to list the relict darter (*Etheostoma chienense*) and bluemask (=jewel) darter (*Etheostoma*

(*Doration*) sp.) as endangered under the Endangered Species Act of 1973, as amended (Act). The relict darter, which is endemic to the Bayou du Chien drainage in western Kentucky, has been collected from only five sites within this drainage and is known to spawn in only one Bayou du Chien tributary. The relict darter has been and continues to be impacted by poor water quality and habitat deterioration resulting from stream channelization, siltation caused by poor land use practices, and by other water pollutants. The bluemask darter is endemic to the Caney Fork River system (above Great Falls), Cumberland River